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ABSTRACT

This paper continues the work undertaken in the first monograph on the complex issue of cultural pluralism and bilingualism. It explores two changes in perspective which have occurred since the late 1960's: (1) the establishment of other or second language schools as a response to the growing importance of language as a political issue and (2) the nature of the research effort in second language learning and new approaches to linguistic analysis. An attempt is made to assess the complex interrelationships of the component factors which influence the language learner in a range of bilingual situations. The theme is developed through a review of literature and empirical studies. First, a review is made of research into language learning, child language, cognitive development theories, and linguistic theory. Methods applying these theories to second language instruction are also reviewed. The second part of the paper is devoted to a review of studies of bilingual programs in societies in which the language groups exist in more or less equal social relationships. Studies are also reviewed that address the problem of language and identity, with special attention to communities or societies where two or more ethnolinguistic communities exist in unequal or unstable relationships. (AMH)

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foreword

This is the second of two monographs on bilingualism to be produced from the Bicentennial Seminar on Urban Education which was held in the United States October 10-30, 1976.

The Seminar was developed under the aegis of the international Institute for the Management Training of Educational Change (IMTEC), which is based in Oslo, Norway.

Over 100 educators from Europe, The United Kingdom, Canada and the United States participated in this unusual study. Scholarly papers explored several of the major themes and dilemmas that dominate education in many urban centers in the United States. Case studies explored in depth problems in education that exist in New York City, Dallas, San Diego and Salt Lake City and Davis County, Utah. These same locations provided field sites for visits by teams of participants in the Seminar.

One such participant was Professor Gerald Bernbaum of the faculty of the School of Education, University of Leicester, England. Professor Bernbaum has done a masterful job of winnowing volumes of data on bilingualism, which came out of the Seminar, and in presenting the material in a lucid form. His frame of reference is a sociological one.

Financial support for this and the previous monograph was provided by the National Assessment and Dissemination Center, which is located at Lesley College, Cambridge, Massachusetts.

We owe a special thanks to the National Assessment and Dissemination Center and its Director, John R. Correiro; to IMTEC and its Director, Dr. Per Dalin; and, finally, to Professor Gerald Bernbaum for their combined efforts in bringing this monograph into being.

Don A. Orton
President, Lesley College
Cambridge, Massachusetts
July 31, 1979

bilingualism in society

As indicated in the first of these two papers on bilingualism* the main theme is to review the relevant empirical studies while at the same time providing a sociological perspective upon the problems associated with bilingualism in contemporary societies. In the first paper some of the general features of the problem were examined, and they were set in the context of other social phenomena such as social class and the development of nationhood. In this second paper, the theme will be the examination of the empirical studies which have so far been undertaken into this difficult and complex area of study.

Cultural pluralism and bilingualism are established features of many societies. The association of cultural pluralism and bilingualism is one of the most deep-seated features of contemporary political life, as bilingualism is so closely associated with issues of cultural identity and individual self-concept. It follows, therefore, that one of the important characteristics of political life in various parts of the world is the persistent 'negotiation' to establish workable relations between differing communities based on an acceptable use of language; the central area of dispute usually arising as minority communities are expected to come to understand and to be absorbed by the majority culture and hence to come to speak the majority language. In the end, debates about bilingualism frequently tend to be debates about ideal states of society or ideal conceptions of man, most particularly in liberal democracies.

The main exception to this common development was the colonial experience, where the imbalance of political power of the immigrant colonizing minority over the numerical power to the native majority put a premium on the minority language as a means of colonial administration on the one hand, and native advancement on the other. Thus, for example, the British colonies tended to speak English, and those Africans or Asians who were part of the British Empire not only experienced the English language as the language of domination but also had to understnd it and use it for their own advancement. As indicated in the first paper, the decline of colonialism has only served to emphasize the problems of communications in such societies. A state was formed, but no nation. A government installed, but no genuinely recognized language of governing existed. The already existing vertical divisions between the indigenous population was overlaid by a horizontal division between the indigenous majority and what has been described by Franz Fanon as the alienated, Westernized, foreign language speaking elite.

*See Bilingual Education Monographs, No. 1, Comparative Bilingualism, Gerald Bernbaum, 1979, N.A.D.C., Cambridge, Mass.

In the West, the principal of self-determination in the colonies was logically extended to different cultural groups. Within the North American context, however, civil rights and the plight of minority groups tended to become highlighted. At the same time, the promise of equal opportunities to all stimulated an examination of the position of immigrant groups whose educational and occupational prospects were deemed to be inadequate. Lack of knowledge of English was frequently found to be a major stumbling block to equal opportunities. Thus, by the 1960s language, and use of language, was a rallying point for those concerned with the socio-economic development of a society and with cultural identity. While a common language and a common education were seen as instruments to equal opportunities the nature of the debate remains political and ethnic rather than educational.

By the late 1960s, the growing political importance of language as a political issue in the contemporary educational debate resulted in the establishment of other or second language schools, most particularly in North America. These developments helped to satisfy the emotional demands of minority groups, but their establishment was, in fact, based on little substantial knowledge of the educational process and the educational consequences. Typical of such schemes were the immersion projects in Canada in which English speaking Canadians, in French-dominated Montreal and Quebec, chose to send their pupils to French-speaking schools, while the reverse was true of French-speaking Canadians. A second change which occurred at about the same time was in the nature of the research effort which responded to the changing political and social climate. This research attempted to re-assess the language demands of minority groups from an educational point of view, and consequently to evaluate the impact of the programs already started. Thus, an enquiry into the whole process of language-learning was re-opened and new approaches were developed to language analysis. The insights developed from this research were later employed in the field of applied linguistics.

In this second paper these changes will be explored. Firstly, the main new socio-psychological theories of learning and the differing theories of language will be discussed. Secondly, pedagogical implications of these insights will be noted, and thirdly, some of the experimental programs which have been initiated will be examined. The main purpose will be to make an assessment of the complex interrelation of the component factors which influence the language learner in a range of bilingual situations. Before this is done it will be helpful to review briefly the main conclusions of earlier bilingual studies in order to set the scene.

Much of the early work on bilingualism began as an off-shoot of the interest in mental structure and the assessment of intellectual ability. In the first part of this century the measurement of intelligence became a central concern to pioneering psychologists. The development of such tests as those of Stanford-Binet and Spearman were major instruments to

measure these mental processes, strategies and skills, which were of such interest to the researchers. Race and language were further aspects which were investigated in order to determine their impact on intelligence. A major weakness of all the work at this time was the insensitivity of many of the tests. Their inability to distinguish the different components of intelligence or to discriminate between the compound effects of the multiple factors involved were serious shortcomings. In addition they suffered from in-built cultural biases. A second important limitation was the lack of controls in the research design. Thus, achievement was measured, ability inferred, and intelligence levels ascribed to pupils. Differences in terms of residence, class, language experience and race were ignored. None of these important variables were carefully monitored or accounted for in the general data interpretation. The early studies over-simplified the issues. For example, no attention was paid to the degree of bilingualism whether balanced or non-balanced (Cummins 1976), or to the process of language acquisition, whether, for example, language acquisition was concurrent or consecutive, informal or formal. The studies also failed to examine the relative status of the different languages, whether the second language was dominant or sub-dominant. Similarly, there was no attempt to look at the motives, incentives, or objectives of the language learner (Genesee, et al, 1976). Thus the studies failed as a result of inadequate conceptualization of the problem, and unsatisfactory linkage of the cognitive and social variables in a broader theoretical framework.

A typical example of such confusion is in the work of Saer (1923). He investigated the difference in performance on academic aptitude tests between bilingual, rural, Welsh/English speaking children and monolingual urban children. He found the former group performed less well and concluded that bilingualism was detrimental to cognitive growth. In some instances, Serota (1923) and Darsie (1926) also showed that there was a conscious attempt to attribute performance differences between monolingual Americans and bilingual Italian-Americans or Japanese-Americans to the sole issue of bilingualism, in order to avoid racialists of that era exploiting their work (Simoes 1977). Other work, such as that of Carrow (1957) failed to distinguish different abilities. He used Spanish bilingual Americans and monolingual Americans in a study which compared the two groups' performance on tests which in fact measured knowledge of English. Obviously, the Spanish group performed less well. This 'evidence' was then used to confirm that, once again, bilingualism contributed to inferior intelligence. Thus, in its early stages of development the general trend of bilingual studies as reviewed by Macnamara (1966) was essentially psychological and limited in the range of causal variables that were conceptualized. The studies naively concluded that bilingualism retarded cognitive growth.

By the end of the Second World War a much wider range of tests had been developed which attempted to measure different types of ability. Thus Darcy (1948) and Spoel (1944) could show that although a language

handicap was evident in verbal tests, bilinguals frequently scored better than monolinguals on non-verbal tests.

Only when Johnson (1953) finally called into question the whole testing procedure were serious attempts made to develop culture-free, non-verbal measures. Further advances were made by Macnamara (1967), a specialist in evaluation and measurement. [However, results were still inconclusive and the research lacked controls.]

A major change in the status of language-teaching and language-learning came, not from any research breakthrough relating to the cognitive or affective advantages of bilingualism, but rather from the post-Sputnik anxieties about American education, (Fishman *in* Simoes 1977). An added language was suddenly considered not only useful, but even crucial to national well-being. Thus, changes occurred in attitudes to language teaching and stimulated a further rash of research efforts to reassess the relative merits of different techniques. Urgency encouraged emphasis on the efficiency and effectiveness of the new language courses. It was during the high peak of behaviorism and most courses relied heavily on drills and language laboratories in the rush for "instant fluency". Novel features were that the language was learned in its own right rather than as a means to master other material. It was learned entirely in the context of the school and was often learned as an adolescent or adult.

However, in the period of re-assessment and reflection after the initial enthusiasm the failure of many of these programs became apparent. Clearly something had gone wrong. As a result, there was much subsequent search for the causes of the failure of the programs both in terms of their operation and in terms of their conceptualization and implicit theories of learning and language acquisition. All of these aspects were the subject of great scrutiny and a plethora of alternatives was generated.

Moulton's review (1961) documents well the consensus of opinion at that time that language was not seen to be rule-governed but rather that "language is habit and the rule a mere summary of that habit" (Twaddell 1948). This view of language emphasized language forms rather than its functions and led to the general belief that it was best taught through an audio-lingual approach, emphasizing mimicry, memorization and pattern drill. The rationale for such teaching methods lay in the empiricist-behavioralist learning theories which were so dominant at that time.

The Foreign Languages in the Elementary School program (F.L.E.S.) described by Andersson (1953) incorporated many of these features. Sadly, Andersson writing in 1969 attributed the failure of the program to these same characteristics. He noted that, "Success still eludes us, not only through the mediocrity of language teaching but in the whole approach of the education system". In Andersson's review of FLES he points to the fact that it was often based on adult notions of grammatical complexity and utility, without empirical data on the natural sequence of language

acquisition which is not always the same for the native learner as for the secong language learner. FLES emphasized language production without ample prior opportunity to hear and understand the language. Exercise patterns were largely of the *focus on* 'syntactic patterns' rather than *focus away* 'semantic phrases'. Andersson was also of the opinion that the time spent on the task was insufficient. Students only spent twenty minutes for three times a week. Moreover, he argued that the emphasis had been placed wrongly on language learning rather than on communicating. Thus, the attention on form over function had adversely affected the attitudes to learning and hence had adversely affected achievement.

Andersson's criticism clearly reflected a whole new set of assumptions about language, and language learning, which needed to be investigated. The advent of Chomsky's theory of transformational grammar (1966) provided a new basis for scepticism about earlier views of language and about the application of behavioral psychology to language learning. Chomsky claimed that language was characterized by rule governing creativity or generative grammar and that it was best acquired by the active use of the innate categorizing ability, not through passive response to structured stimuli. He further drew attention to the creative use of language during acquisition which he argued was made possible by the universality of its underlying linguistic structures and by the growing powers of the individual to abstract words from the referents they symbolize. Central to Chomsky's ideas was the innate capacity for organization and categorization inherent in human cognitive processes.

The ascendancy of what came to be known as rationalist-cognitive theories over the earlier empiricist behavioralist ones had a profound effect on applied linguistics. Diller cites a number of programs which attempted to incorporate these new features. One of the main differences was in the renewed appreciation for grammar rather than grammar-translation. Thus, while aiming to make the target language become psychologically real, the learner was encouraged to use it for expressive purposes, and to generate his own replies rather than to make stereotyped responses to standard cues. Instead of laying the burden on the learner to internalize the pre-packed program, the new approach reflected more direct teaching.

Thus, there was a revival of what is now called the Direct Method. This had originally been propounded by de Sauze (1929) and had been tried in Cleveland at that time. The method involved no translation; instead it provided a carefully graded progression of construction which demonstrated a grammatical rule in action through a series of meaningful and situationally realistic exercises. Syntax was taught through the structures which were explicit, and the emphasis was on the semantic context and its use in the communication process. Oskarsson (1973) found that explicit formulation of the grammatical rules, after having seen grammar-in-action, facilitated the acquisition, application and extension of its use. Thus, the Direct Method was seen as a considerable departure from the

behavioralist drills which aimed to inculcate structured habits. These drills rarely explained the rule to be learned and never encouraged the student to create analogous responses. In these older approaches there had been little regard for the meaning of the drills, thus making it difficult for the pupils to see how the structure was actually used in exchanges.

Many combinations of strategies were used in a variety of programs which developed at this time in response to the new demand for languages. One alternative was The Silent Way (Gattegno 1972) in which the teacher remained silent for most of the time. In this method each word, phrase or structure was introduced only once and then followed by a chorus response. Individual feedback was achieved by gesture until students reached the correct forms. This was believed to promote listening skills and to encourage language production from the students, both of which are deemed to be important in language acquisition. The Rapid Recognition program, on the other hand, required the student to be silent for most of the time. Vocabulary was learnt by matching pictures to words, thus comprehension was to be promoted at the expense of communication (Winitz and Reeds 1973).

A rather more balanced approach can be found in the Total Physical Response Course. The teacher gave commands and the pupils responded in actions. About 70% of the student time is spent in listening, 20% in speaking, and 10% in reading and writing (Asher 1974). Finally, the Community Language Learning Method involved small groups of students sitting and talking to each other in their mother-tongue, while the teacher simultaneously translates. After about twenty minutes the teacher would write key words and phrases on the board, structures were discussed and lexical and grammatical aspects systematically learned (Curran 1972). The advantage of this system is said to lie in the fact that what is learned is directly related to what the pupils want to say. Thus, the students provide the basic curriculum material which improves the motivation to learn what the teacher then explains. Engle (1975) and Saville-Troike (1973) have both shown the importance of the teacher's acceptance and use of the students' own cultural and linguistic experiences in the acquisition of a second language.

However, with the tremendous variety of approaches and the diverse assumptions entailed there is no longer any consensus about the nature of language teaching. Steinberg (1974) bemoans the fact that there are no guidelines, no agreed objectives, teaching techniques or assessment methods. He also points out that most programs are divorced from a bicultural context and that insufficient attention is paid to the students' previous cognitive experiences, or in Gagné's terms, to the prior development of the individual's cognitive map.

In the absence of any consensus in teaching techniques it has become increasingly clear that the answers to many crucial questions concerning how language is learned are still unknown. It is questions in this area that

researchers have attempted to answer. How, for example, do infants learn language? Is the process of second language learning similar? To what extent does age affect language learning strategies? Does the knowledge of two languages cause interference, or does it clarify through contrast? If language interference is minimal does mother-tongue fluency and literacy help or hinder second language learning? Apart from these questions relating to the process of language learning there is also considerable concern for the effect of bilingualism on general cognitive developments and on social relations and individual identity. These last concerns hark back to an earlier era in research on language while at the same time reflecting contemporary political and social anxieties.

This more recent upsurge in interest in language programs has, in fact, been the result of a totally different set of circumstances. In the late 1960s the pressures developed from the whole problem of the urban disadvantaged and ethnic minority groups. In the United States, in particular, the association of the Civil Rights Movement with the demand for effective second language teaching added a new dimension to the problems of language learning. Conventional foreign language programs came to receive less attention than new programs which aimed to help ethnic speaking pupils in a predominantly English speaking society. A new dimension was added to bilingualism which came to be known as 'additive', when the second language was thus added to the mother tongue and both languages maintained, and subtractive when a second language replaced the use of the mother tongue. In order to try to convince those who were sceptical of these newer approaches great emphasis was placed on respect for other languages and cultures, and hence a new perspective to language programs was incorporated. At the same time opportunities were given to English speakers in the host community and in the dominant community to acquire and even learn minority languages. For example, in the Culver City program this dual function was included. However, scepticism has continued.

There is little agreement about the form of the programs, and there is also little agreement about their new and wider functions. Recent authors have indicated that the criteria for entry into New York bilingual programs show great lack of clarity. Moreover, there is uncertainty over the design of programs and even over the kind of pupils for which the programs are intended. For example, a child is excluded if its English is good enough for the regular classroom, or can be withdrawn if the parents fear vernacular education will result in poorer English. A child with an Italian or Spanish surname, even if illiterate in either vernacular, is eligible. Non-English speaking ethnics of above average intelligence are mixed with English speaking ethnics who are handicapped by poor language abilities often due to low intelligence. Thus, there is a confusion over the degree of choice and compulsion, and also uncertainty as to whether the programs are meant for those with inferior knowledge of English, or those of inferior intelligence. Fishman expresses the feeling that because all

ethnics are eligible, bilingual programs may exaggerate racial differences by stressing inequalities. There is a need, therefore, to distinguish the aims and objectives of both policies and programs. The three main alternatives which Fishman identifies are compensation, group maintenance and enrichment. Compensatory programs are those designed to overcome the lack of language skills in the use of the dominant language (usually English). Alternatives are to organize the immediate immersion of the pupil in English as a medium of instruction for all learning, or to require the pupil to learn initially in the mother-tongue, with English introduced as a second language, before ultimately transferring to English as the main language. Such programs for ethnics are often compensatory and transitional, and "lack of English" is often seen as "the disease of the poor".

The second form is one in which the vernacular language is respected in itself as an ingredient of a healthy self-concept and of ethnic-group maintenance. Schooling is often begun in the mother-tongue, and although English is gradually introduced as the main medium of instruction, the vernacular is retained. This assumes a different response to the differing conceptions of a society. Quite simply, much depends on whether the ideologies held are those of the 'melting pot' or of multi-culturalism. Some have argued that even here there is an underlying element of 'unmeltables', who cannot be absorbed into the dominant culture and for whom bilingual education will remain a form of second class treatment.

The third approach, enrichment, is designed to foster inter-group relations by totally immersing pupils of one language group in the language of another, by using it as the medium of instruction throughout. Thus, the second language is no longer a target of instruction but a process of communication.

The success of all these approaches has depended upon the accuracy of the assumptions upon which they were based, most particularly, the assumptions about the process of language acquisition. The important question for the bilingual programs was how the infant acquired language and whether the second language learner used the same strategy. The work of Piaget (1970), Chomsky (1972), and Bruner (1964) all seemed to agree that the infant learner listens, absorbs, and reacts to others' speech, thereby judging comprehension through the nature of feed-back even at a pre-verbal stage. The infant also finds patterns, imitates sounds and phrases, and then constructs his own. Thus, by experimentation he tests the effectiveness of his communication efforts; he learns by trying in a trusting environment. The infant learns to distinguish the meanings of different speech rhythms, inflections, tones, as well as actual words. Through language he interprets and predicts others' behaviour and expectations, and expresses his own, which is the key to a secure social identity. Brown (1973) emphasizes the need to understand the cognitive level of the child and the logic of his own egocentric viewpoint in order to

understand nature and meanings ascribed to words and to the simplified intermediate structures used. As Labov & Labov (1974) point out, a child is continually testing, refining and divining the meanings of words he hears and uses. The interim grammar which a child develops has its own internal logic devised to communicate his meanings. To the extent that he cannot communicate he is under pressure to alter his style in order to reach others.

Guskin (1975) reports that most investigations of second language learners conclude that the acquisition process is similar. However, Chomsky (1965) asserts that the properties of mind which enable a child to acquire his mother tongue are not the same as those which operate in second language learning. The innate acquisition system of the infant atrophies. Most individuals seem unable to deal with a second language unless it is presented to them in a highly systematized way. There is no necessary contradiction between these two views, for while the strategies for the native language learning infant, and those of the second language learning child may be analogous, it also seems to be true that the adult second language learner does need a more systematized approach. He has learned to look for reasons and rules and may feel lost without them. Krashen and Selinger (1975) conclude from their study, that while formal language construction is useful to the adult, it is not essential to the child who has an impressive ability to learn a second language in an informal environment. Guskin states that the child is used to having a limited knowledge of each area it discovers and does not suffer the same frustration as an adult. Cazden (1972) showed that children below grade 3 or 4 found it difficult to monitor their own speech and to apply systematic rules. Neither, according to De Villiers and De Villiers (1972) did they see the need for the application of such rules.

As well as age affecting strategy of learning there is a considerable body of research concerned with age and efficiency of learning. Andersson (1974) recommends that a second language be introduced before the age of 5 as during this early period there is a tremendous learning potential. Ervin-Tripp (1974) recommends the age of 7 to 9 when the memory span is more developed. Saville-Troike (1973) suggests that at the age of 10 there is less interference, as the first language is more fully developed. Snow (1973) prefers adolescence, as there is likely to be a greater motivation to learn if it derives from commitment and choice rather than compulsion. He finds, however, that younger children are less inhibited and are frequently more eager to learn. On the other hand, Rosansky (1975) argues that if a second language is attempted before the stage of 'formal operations' is reached at adolescence, then the child is often more successful than when he attempts to superimpose logical categories. He can acquire the second language less painfully while he is still highly concerned with focusing upon one dimension at a time.

Thus, for the young child it is better to encourage an implicit

approach of observational learning and trial and error. In addition, it clearly helps to provide a secure social environment which enables the child to take risks in his experiments with communication. However, as Guskin warns, the pressures of classroom size and curriculum time tends to promote telling, rather than exploring, and rules rather than uses. Hence, the need to re-examine basic learner goals to stimulate motivation and meaning. Guskin also points out that language abilities grow as the child's need of them changes and as the nature of the demands the school makes upon the child alter. As the interactions between pupil and teacher become more controlled and more subject-orientated, new vocabulary, new content, and the need for more explicitness develops. Also the wider range of activities makes different social and cognitive demands. Verbal interaction becomes less linked with social relations and more precise, more semantically and syntactically differentiated. Thus, as the child matures his need of language becomes more systematized (Barnes, Britten, Rosen 1971). However, peer group interaction continues to be vital for the growth of social relations and the concomitant language skills. Therefore, the creative use of peer group interaction promotes the expressive use of language.

Much of the concern associated with age and the strategy and effectiveness of second language learning is based on fears of interference between the two languages. Dulay and Burt (1974) have made a thorough investigation of language errors, and found that only 5% were related to confusion between the two languages, but that 87% were related to the level of the linguistic development of the learner and his sensitivity to semantic and syntactic differentiation which also occurred in the monolingual. Interference could be of three different types: first, socio-cultural, in which meanings were muddled as the whole situation was alien; second, lexical, for example, the Urdu word 'gehra' means both 'deep' and 'dark' in English; third, structural, for example in Telegu the verb 'to be' is omitted; and fourth, phonetic, for example, in Spanish there is no distinction between the vowel sound in the English words 'sit' and 'seat' (Matluck and Mace 1973). Similarly, in Gujarati there is confusion over aspirated and unaspirated forms of the letter 'P', the letter 'V' and the letter 'T' (Harrison 1971). One other area of concern has been the ways in which interference could be centered on the mode of cognitive representation. Alternative suggestions here have ranged from those of Weinreich (1953) who believed different languages were known in a co-ordinate relationship, where each was separately known, to those of Taylor (1976) who believed languages to be known in a compound relationship which was inter-dependent and thus more easy to confuse. However, Kiler's experiments (1966) led him to argue that memory was a non-linguistic systematic storage system and that bilingualism could not interfere with simple vocabulary recall. Later Swain (1972) came to the conclusion that the issue was more complex. He suggested that there was a common language pool for basic rules, but that there were separate pools for other

rules unique to each language.

There is, therefore, little agreement about the linguistic nature of interference or about the learning strategies and skills in relation to age. Hornby (1977) suggests that the different contexts of learning and the different purposes to which language is put are also important. Thus, whether each language is used in totally different situations or whether they are interchangeable in social use may well have greater significance for interference than the other linguistic niceties. Swain and Barik (in Simões) also urge that the wider contexts of learning should be examined. They believe that the most important impact of age lies in the changing motivation and the extent and nature of the peer group pressure. They also warn against the pitfalls of using age in relation to achievement, as it is difficult to compare the ability of an older child to learn a second language with that of a grade 1 pupil to learn to read and to speak a second language, when he is only beginning to learn to read and write in his native language. Thus, instead of examining age and language learning levels of bilinguals it would be more fruitful to investigate the effects of bilingualism on learning as such, and the effects of bilingualism on cognitive and social development in general.

Pioneering work of this nature was first done by Peal and Lambert (1962) when they began a series of investigations in Montreal. From 1960 the threats of separation of the French-speaking Canadians had led to the introduction of several "immersion" schemes. The best known of these was the St. Lambert French Immersion Program for English-speaking parents in a middle class suburb of Montreal. Pupils entering kindergarten began learning totally in French. At each successive grade a little more English was introduced as a subject of the curriculum. Peal and Lambert set out to pin-point the intellectual components of the intelligence deficit that has so often been reported in bilingual studies, and to try to develop compensatory strategies. In fact, they found that bilinguals scored higher on both verbal and non-verbal measures, and that the bilinguals had a significantly more diversified structure of intelligence and more flexibility of thought. Although initially bilinguals performed less well while making the language adjustment, by grades three or four they performed as well as monolinguals. By grade six, although essay content was less rich in terms of vocabulary, the two groups were otherwise equal and the bilinguals scored higher in cognitive flexibility. In a later study, bilinguals were found to be better at perceiving similarities and differences when learning words of an unknown, nonsense, language (Cohen, Tucker & Lambert 1967). The last results of this longitudinal study (Lambert and Tucker 1972) showed that bilingual students had kept pace in their native English language with monolingual English students. They had also kept pace in general cognitive development and in content subjects. Intercultural studies were also found to be more positive. Finally, although composition content was less rich, there were no more grammatical mistakes than for monolingual native French speakers. The researchers,

therefore, concluded that "bilinguals were better at separating word meaning from word sound and at realizing the arbitrary assignment of names to referents", a feature which Vygotsky (1962) believed reflected insight and sophistication. Lambert used these findings to counter the bilingual deficit notion which he argued was being used to promote the desirability of the 'melting-pot' view of society. These new findings were put to good use by those supporting the multi-cultural model of society.

As a result of these findings other programs in Montreal were begun, and also in Ottawa, where Barick and Swain began a similar series of studies in 1970. The results were comparable. In the first grade, French immersion pupils were less good at English language skills than were those pupils in an English medium school. However, by the second grade, where English was learned for sixty minutes a day, there was no significant difference between immersion pupils and the control group. By the third grade, both languages remained comparable with control groups and so did other subject contents. However, in mathematics, although the immersion pupils scored better on computation they did less well on problem solving. Thus, in no way did the evidence support the conclusion of earlier studies that bilingualism retarded cognitive growth. Other studies of the Protestant School Board of Greater Montreal (1969) and of Peel County Brampton, Ontario (1971) in which immersion was delayed until the seventh and eighth grade also yield similar positive results from bilingual programs (Barick, Swain, Gauchio 1976).

One further major study of the Canadian immersion experiments was undertaken by Macnamara and is reported in the recent book by Simoes. This study involved a much larger sample and included both English and French schools. Teachers' assessments were also collected. Firstly, Macnamara found that although speech seemed superficially good, knowledge of the language in its written form showed that the bilinguals used a restricted syntax and vocabulary. This is similar to Lambert's and Swain's findings where composition was described as less "rich". Secondly, accent was not as good as in the Lambert and Swain studies. This, Macnamara attributes to the fact that in his study the pupil intake was of a mixed variety of other tongues. Such evidence points to the important lesson "that the main teachers of accent are other children. Peer group pressure to conform is very strong". Macnamara also noted the English children took longer to be fluent than did the French. He attributed this finding to social factors which will be discussed below.

Another cognitive finding was that there was little difference in performance between children whose native language was re-introduced at grade three or at grade five. The skill of reading in the native language was not related to the number of years of school study. However, there was a significant correlation between children's scores and the length of the attendance, especially in the English immersion schools. This would seem to support the teachers' feelings that children immersing late never really mastered the language, and found their studies were seriously disrupted.

In contrast to other report findings, Macnamara's more detailed investigations did find negative results in other school subjects, particularly the social sciences where the reading materials caused problems and the content comprehension suffered. Also, as composition was more restricted, bilingual pupils found it harder to express their ideas.

Despite Macnamara's more cautious findings, results still seemed to show that bilingualism did not cause retarded cognitive growth. Neither was it detrimental to the development of the first language. At the same time the second language developed to a higher standard than that obtained by control pupils, who did not learn in the second language, but studied it only as a set subject. It must be remembered, however, that all of these studies were in a Canadian context where the languages in question, French and English, have a common Latin base and a not too dissimilar culture. Also, the pupils who participated did so voluntarily, and with full parental support. Furthermore, the families involved were of middle class origin and, given the political background, were highly motivated to learn a second language. Thus, great caution is needed before assuming that these conclusions could be extended to reflect the pattern of bilingual learning in very different socio-political or cultural situations.

Bruck, Rabinovitch and Oates (1975) studied children with already known language learning difficulties and concluded "that such children, when enrolled in immersion programs, do not fall differentially behind their counterparts enrolled in regular schools". Edwards and Casserly (1973) found that immersion did not result in a measurable increase in learning disability and that it did yield significantly greater social maturity ratings. Swain reports (1975b) that "the correlational analysis of I.Q. and achievement data supports the notion that learning to understand a second language is, of all the skills measured, the least dependent on I.Q.". Other researchers turned, not to ability differences, but to class differences to see to what extent the concept of the disadvantaged learner was relevant to language learning. Bruck, Tucker and Jamkimik (1973) and Tucker, Lambert and d'Anglejau (1973) all concluded that immersion programs are as appropriate for working class children as they had been found to be for middle class children. However, Ben-Zeev (1975) did not find this to be the case in her study of the pupils of low socio-economic class in a Spanish-American program. Neither, it seems, did Macnamara find that class differences could be easily dismissed. He mysteriously mentions that one particular school, different from the others in his sample because its pupils were of lower socio-economic class, did not follow the trend reported in the others, and to avoid distorting the results, the school was omitted. It was also the school which had the largest number of children whose native tongue was neither English nor French. It would be extemely interesting to know just what differences did exist and in what way they were related to the class composition and language composition of the pupils.

Certain distinctive skills and strategies were repeatedly found in the

studies of bilingualism. Ban-Zeev (in Simoes) summarizes these as consequences of strategies used in striving to overcome language interference at a structural level. Thus, bilingual pupils are more sensitive to language components and are better able to analyze language. They also develop a greater ability to scan a situation for feedback cues. Pupils tend to oversimplify languages in order to maximize the structural differences and to neutralize nuances within each language. Radike (1973) also supports the suggestion that bilingual students develop a greater sensitivity to the linguistic aspects of language and also to the cues which can be derived from the situation in which language is used. Bilingual pupils are often, therefore, more aware of non-verbal cues and more responsive to senses and feelings. Radike also suggests that bilingualism is often associated with symbol preference, for example oral and visual over written symbols. This is extended to specific 'modalities' of inference, for example the ability to categorize, compare and find relationship. Finally, Radike believes that this cognitive sensitivity also results in greater social empathy and leads to better peer integration.

Nevertheless, very little of the research deals with the social effects of bilingualism. Macnamara did investigate friendship patterns in immersion schools where there was a mixed intake of pupils speaking either English or French. He found linguistic groups to be highly significant, especially in the French schools. The teachers, the French and English pupils, all felt that the English pupils were less welcomed, but that this was partly because of their own arrogance and cliquishness, which may also partly account for their weaker fluency. However, this poorer integration may also be accounted for by the fact that in the French schools English and French children (both learning in French) were segregated until the third grade.

Lambert, in his study of the Montreal schools tried to investigate the effect of bilingualism on the pupils' sense of cultural identity. He first studied adolescents of mixed French/English marriages. He treated these as marginal men (Aellen and Lambert 1969). He found that attitudes depended on the acceptance of the marriage both by the grandparents and by the neighbourhood. In two further studies (Gardner and Lambert 1972, and Lambert and Tucker 1972) four different reactions were identified; positively French, positively English, those who claimed to belong equally to both communities, and those who claimed to belong to neither. Generally he found bilinguals to have positive bi-cultural profiles, which he attributed to the political climate of the time and to the government support for and respect shown to minority cultures.

Again, it must be pointed out that, so far, most of the studies reporting on the positive cognitive and social effects of bilingualism are all studies where either the two languages and two cultures are relatively similar or at least where each language has a significant social value in different contexts. This is as true of Canada as it is of Singapore (Torrance, Gowan, Wu

and Aliotti 1970), Switzerland (Balkan 1970 and South Africa (Ianco-Worral 1972). In each instance bilingualism is pursued by immersion not submersion, by additive not subtractive means. However, where two or more ethnolinguistic communities exist in unequal or unstable relationships, second language learning will have important implications for ethnic identities. Thus, to examine bilingualism without due regard for the wider socio-cultural, economic and political considerations would lead to superficial and possibly dangerously inaccurate conclusions.

Language is a major feature of identity. It is not just an educational issue but an emotional one because it is a symbol of loyalty and values. Taylor and Simard (1975) report that French Canadian respondents identify more with English Canadians who speak mainly French than with the French-Canadians who speak largely English, the latter being seen as traitors who have sold out to the English. Similar language loyalties have also been seen to be evident in Wales (Giles, Taylor and Bourhis 1977) and in Malaysia (Villiers 1972). Inter-group competition has also affected attitudes to language in Southern India (Garg, Inder, Sheker and Taylor 1972). Gardner and Lambert (1972) urge the use of instrumental and integrative motivation, but not at the cost of threatening ethnic identity. Thus Taylor concludes (see Simoes) that it is not the feared limitations of language teaching techniques that is the barrier, but rather the motivation of the members of both groups and the dynamics of inter-group relations that is crucial. Hence, he suggests the need to examine how the second language affects the minority group, how attitudes to minority group languages can be changed within the dominant group, and how the individual's choice of languages in any inter-group situation can be interpreted as expressing feelings ranging from co-operation to hostility. Hence Taylor argues the real problem is the non-fluent bilingual whose lack of fluency and control of nuance can lead to serious misunderstanding.

As shown in the earlier paper, plural societies have adopted many different strategies to cope with this ethnolinguistic problem. In some, the colonial language is retained as the real language of common use. Mostly this will be because of its economic role in the development of the country. Thus, in the Philippines English is the official language and Filipino, the National language, serves as the focus of national identity. A bilingual educational system is in operation, neither of which languages is the mother tongue for the majority of citizens (Sibayan 1977). Other countries, such as Nigeria, use the vernacular languages as the main mediums of instruction at primary level and English as an official language, the official language being the common medium of instruction at secondary school level. Thus, a foreign language is learned for motives of economic development, while the vernaculars are also used as a result of the political demand for universal primary education (Fafunwa 1975). Other countries go overboard in their attempt to use a common language to forge national identity for the multi-cultural population; sometimes this occurs at the expense of the economic pressures for a second international language.

Illustrations of this can be witnessed in Malaysia where the Bahasa Malaysian is promoted as the national language, despite strong resistance from Chinese and Tamil-speaking communities, a situation made somewhat worse by the demise of English as an official language.

The decision about the choice of national and official language is a political one. Whatever the choice there still remains the choice of when, where and how to introduce it into the multi-lingual school population of such plural societies. The issue of the relative advantages of starting formal learning in mother-tongue rather than the second language has received a great deal of attention in the past decades. Not only is it important to investigate the effect of timing and manner of introduction of the study of either language on cognitive development, but also the effect upon self and ethnic identity.

As has been seen from the Canadian studies there is little conclusive evidence about the superiority of starting schooling in the second language instead of a gradual transition at a later stage (Valdes-Fallis 1972, Engle 1975, Paulston 1975a, Cohen and Loasa 1976). Certainly no adverse cognitive effects have been reported, nor any evidence of schizophrenia (Christopherson 1948) or marginality (Lancy 1974) as a result of bilingual-bicultural experiences. However, Shore (1974) notes that in some American schools where learning is in the vernacular first, English is often hurried into the curriculum almost simultaneously. Also, Phillips (1975) reports that language switching behaviour of some teachers led the pupils to attribute more importance to English as the language of discipline and directions, while the vernacular was used for content. It is this type of situation that leads to the vernacular language and culture becoming regarded as inferior. Frequently this can bring about a subtractive rather than an additive bilingualism. In this sense bilingualism can be perceived as a threat to individual and group identity.

Genesee (1976) argues that in circumstances where the different linguistic cultural groups are co-equal or stable, it is vital to nurture the vernacular first, and then to introduce the second language. He argues that this will produce a healthy psycho-socio-development which is crucial to the linguistic and cognitive process. Seelye (1974) urges further the importance of fully incorporating cultural understanding into language instruction. Failure to do so results in pseudocommunication. Thus teaching culture is not just a matter of making Christmas cards and 'Deepavali' cards, but should include the assumptions, values, customs and patterns of everyday life.

In any study of language education for minority groups it is important to remember both that such minority groups are often disadvantaged groups, that the two sets of problems are frequently indistinguishable, and may also result in still further and different problems when compounded.

Consideration of the use of mother-tongue is intimately connected to

theories of the development of the self-concept. In the period of primary socialization, the family is the child's world (Berger and Luckmann 1967). The language spoken by the family is of immense significance in the creation of the child's identity and is the crucial mediating factor in the development of his self-concept. The relation of the symbolic universe to social phenomena is central to the child's internalization of reality. Thus, the appearance of an alternative symbolic universe poses a threat to one's own self and one's own sense of identity.

When the child reaches the secondary stage of socialization, at school, if he finds that, to use G. H. Mead's term (1934), the world of the generalized other disvalues the world of his significant others, then he is likely to experience great strain in the re-evaluation of self and others. As Christian (in Simoes) points out, often the minority home language is used at school only to reduce the degree of retardation or the strains of adjustment and transition to the dominant second language. It might also be used to encourage those who speak the minority language to feel better about their otherwise defined deficiencies. However, early and continuing literacy in the home language might have more beneficial social and psychological results, than acculturation and assimilation through the oral use of the home language in school. Such literacy, Christian claims, "could provide a form of creative, cultural pluralism, the enhancement of the self-concept through improvement in intercultural, and even international relations." Biliteracy increases the range of personal alternatives, from occupation to manner of being (Andersson 1975). Failure to develop biliteracy implies the continuing discrimination against minority language and culture.

Kaminsky (in Simoes) adds that the mother tongue is the language of affective meanings. It is the language that communicates the expectations others hold for the child, and he holds for others. It is the language which serves as the means of personal expression, development and expansion. On reaching school age, the pupil arrives in a different setting, with different relationships, rules and values. The child is faced with the problem of deciphering a language and in understanding the behavioral demands being made of him. Conflicts between the two languages and two cultures can present severe difficulties.

Here, the argument shifts to problems of bi-culturalism rather than just bilingualism. As a result the old problem of the relation of language and thought is raised and thus the whole question of child development. There is, however, yet another aspect to consider, which again relates to the optimal age at which the second language should be introduced. This is the problem of learning to read while learning the language.

Reading assumes the control of the spoken language, for the reader needs to make use of his knowledge of language to interpret the sound and meaning of visual symbols. As Carroll (1964) has noted, "reading is an activity in which a spoken message is reconstructed from the written text." The bilingual child's problems are much greater when his knowledge is that much weaker. The fluent reader relies on his knowledge of the

language to make reasonable predictions. Thus the matching of symbols and context is an integral part of the reading process. Weaver and Kingston (1971) point out that despite heavy reliance on oral language production as evidence of reading, the conclusions that oral and reading skills share the same operations cannot be strongly implied. Nevertheless, the decoding of graphic symbols is greatly enhanced by general language competence, just as language learning through reading is enhanced by the prior ability to read. Hence, the separation in time of learning to read and learning a second language would enable the child to achieve greater success in each skill, thus increasing his confidence and his learning potential. The bilingual child who is less sure of either language cannot trust his intuition. As Gumperz, Herman, and dez Chavez (1972) conclude, the tendency to break down the reading process into minute parts results in highlighting errors and forces the deciphering to be done in a way that is divorced from context. In turn, this increases the bilingual child's difficulties and probably his sense of failure.

A consideration of reading problems points to the need to comprehend context, which is the key to learning to read. It has further been suggested that, particularly for minority groups, more use of their life experiences should be made in the development of reading materials. O'Brien (1973) encourages pupils to dictate their own stories as a basis for reading to allow creative oral usage of either language at the same time. Another important point is the attitude that teachers have toward errors. Quite simply, are they to be deplored or constructively deployed? Also, the form of the second language to be taught must be decided. For example, if English, whether the teacher should insist on standard English, or allow non-standard English to prevail and the range of registers to be encouraged. This, again, often relates to the respect given to dialects, minority languages and their cultures. The kinds of language a child uses and the kind his parents may wish him to use, depend on many factors beyond the linguistic issues related to bilinguals. As Kaminsky points out, bilingualism needs to be discussed in a broad socio-economic framework. The work of Nisbet (1961), Klein (1965), and Lawton (1968) all point to differences in family structures, practices and attitudes which affect the child's linguistic experiences and his approach to other codes or languages.

Most of the work on bilingualism in Ameica has been with European minority groups, though more recently Hispanic groups have also been the object of research. In England, the research is almost exclusively with Gaelic minorities. Some work has been done on what is now termed non-standard English (Labov) but very little indeed in England or America on the problems facing Asian minorities. Some work has been done on the non-European minorities of America, including the American-Indians. It is this work which is perhaps of greater relevance to the growing interest in Asian minority groups in England and their demands for educational support, most particularly as the demands for educational support are now being framed in relation to the maintenance of cultural identity and

language uses. Quite simply, in modern Britain there is a shift from the melting pot thesis toward the notion of multi-culturalism.

Read, Spolsky and Neuridorf (in Simoes) studied the impact of bilingualism on the Navajo reservation, where 70% of grade I pupils speak no English whatsoever. Although the community was very desirous of education, there were very mixed reactions to the medium of instruction. Many feared that they would lose their own culture as they learned English. Some were even afraid to see Navajo teachers go off the reservation to be trained (Spolsky 1974). Others, however, felt that English was important for their children's future. Some wanted the continued use of Navajo in the first grade in order to help adjustment. This led to the need for more Navajo-speaking teachers or teacher aides which posed a threat to the established staff and many relationships were thus made more difficult.

An enquiry into recently arrived British minority groups raised rather different issues (Kahn 1976). All Asian groups wanted English education which they felt was the key to gaining a job and being able to get on in everyday life. However, given the greater insecurity of their stay in Britain due to recent legislation and growing hostility in some districts, parents are becoming anxious to keep open as many options as possible. Enrollment in evening or Saturday schools for other language studies is considerable. Other cultural activities are also fostered, for example, dance, drama and song groups which participate in concerts and national competitions. Some parents are also hoping that at the secondary level, when pupils have language options, more Asian languages can be made available instead of only the conventional European ones.

Bilingualism is very often a feature of the countries from which the Asian immigrant comes, and is accepted as a matter of course in that country. One reason why it is difficult to assess the demand for mother-tongue relates to the organization of the minority groups, most particularly the critical role made by the leaders of the minority groups. Some of these do not always voice majority feeling but try to direct their members towards changes which are considered desirable only by small groups within the minority populations. Thus, it is hard to distinguish their personal opinions from those of the populations they are trying to represent. Also, many immigrants regard their stay as temporary, and thus do not take action to develop long-term plans. The immigrant communities are also very diverse in their composition with regard to language, religion, caste and origin. Finally, the common awe in which authority is held reduces the likelihood of demands being made effectively through democratic channels.

Although the use of mother-tongue is claimed to help adjustment to schools and to learning by giving initial confidence, the maintenance of the home language also helps to reduce the generation gap which often results where children are educated in a language different from that of their parents. This last point is one of the key factors that might encourage the teaching of English to Asian adults, especially to the mothers who are

generally less exposed to opportunities for language learning (Beaumont 1976).

Most of the adjustment, however, to school life that takes place is through submersion in the second language, i.e. English. Immigrant children attend regular schools in which all subjects are normally taught in English, and are taught by English speakers to mainly English children. In order to help immigrant groups gain confidence in the new language skills, primary school children are often withdrawn for small group work with a teacher specializing in the teaching of English as a second language. Secondary school children in some authorities go to a common center for much of the first year where they are taught English through a variety of secondary school subjects (Chapman 1976).

The arguments for the use of mother-tongue at primary level, or for the maintenance of mother-tongue at secondary level, are themselves inconclusive from the language-learning research. Without evidence in any research to date of the effect of mother-tongue in school on individual, or group identity, and without certainty as to the extent of the demand for mother-tongue teaching, the debate still rests on emotional pleas rather than educational merit. Furthermore, the problems of administering the mother-tongue policy could be immense as the materials and teachers are not sufficient. More teacher aides could be temporarily used, but it would require a great deal more certainty, knowledge and confidence in the outcomes before such a program is likely to be given the considerable financial support it would inevitably require.

Thus, in reviewing the literature on bilingualism it can be seen that great progress has been made since the pre-war studies. The use of more sensitive measurements, particularly of the cognitive aspects of bilingualism, and the greater care taken to ensure that controls are made of the many relevant variables have served to improve the quality of the research. There is, therefore, in many senses less confusion about the nature of the problem than previously existed. On the other hand, the greater quality of the research has only served to highlight the complexity of the substantive issues. Much of the work has been done on language use, and there remain many under-researched areas relating to the broader socio-political contexts. It must be remembered that the effects of bilingualism cannot with certainty apply to situations beyond that particular context in which the research work is being done. Bilingualism has become a major political issue. Decisions cannot easily be made on educational grounds even where those grounds can be clearly identified. Much of the important decision-making relates to the political arena. Thus, a closer examination of the source, nature and extent of demands made for and against bilingual programs, and for and against particular forms of bilingual education, must be carefully undertaken before any realistic decision can be made. Throughout, the effectiveness of the program must be gauged in political terms as much as educational and should include an awareness of the assumptions, values, customs and patterns of everyday life.

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